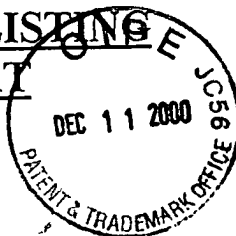
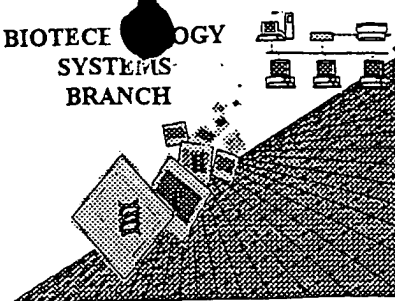


**RAW SEQUENCE LISTING**  
**ERROR REPORT**



BIOTECHNOLOGY  
SYSTEMS  
BRANCH



0500  
#4

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

09/598,042

Source:

01P

Date Processed by STIC:

6/30/2000

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR FURTHER INFORMATION, PLEASE TELEPHONE MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

**Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October-1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIIPE

## RAW SEQUENCE LISTING

DATE: 07/06/2000

PATENT APPLICATION: US/09/598,042

TIME: 17:53:44

Input Set : N:\jumbos\598042.txt

Output Set : N:\CRF3\07062000\I598042.raw

Does Not Comply  
Corrected Diskette Needed

```

6 <110> APPLICANT: Tang, Y. Tom
7   Liu, Chenghua
8   Asundi, Vinod
9   Xu, Chongjun
10  Zhou, Ping
11  Ma, Yunqing
12  Wang, Jian-Rui
13  Zhao, Qing A.
14  Ren, Feiyan
15  Chen, Rui-hong
16  Wang, Dunrui
17  Wang, Zhiwei
18  Wehrman, Tom
19  Zhang, Jie
20  Qian, Xiaohong B.
21  Tillinghast, John
22  Drmanac, Radoje T.
25 <120> TITLE OF INVENTION: Novel Nucleic Acids and
26   Polypeptides
30 <130> FILE REFERENCE: 784CIP2
C--> 32 <140> CURRENT APPLICATION NUMBER: US/09/598,042
C--> 33 <141> CURRENT FILING DATE: 2000-06-20
36 <150> PRIOR APPLICATION NUMBER: 09/552,317
37 <151> PRIOR FILING DATE: 2000-04-25
39 <150> PRIOR APPLICATION NUMBER: 09/488,725
40 <151> PRIOR FILING DATE: 2000-01-21
42 <160> NUMBER OF SEQ ID NOS: 331
44 <170> SOFTWARE: pt_FL_genes Version 1.0
50 <210> SEQ ID NO: 1
51 <211> LENGTH: 1630
52 <212> TYPE: DNA
53 <213> ORGANISM: Homo sapiens
55 <220> FEATURE:
56 <221> NAME/KEY: CDS
57 <222> LOCATION: (261)..(1052)
59 <400> SEQUENCE: 1
60   cccgacgtcg catgtcccg gccgccatgg ccgcgggatt ttcccgggtc gacgatttcg      60
62   ttttgctcac aggctggagt gcagtgggtc aatctcagct tactgcaacc tccgccagtg      120
64   aggcccttca ttagacacta atttgaagct atggcattcc cccactatga gccacacctgt      180
66   cagccaggct atctgccttg atcctagatg aagtggccat tctgcctgcc cctcagaacc      240
68   tctctgtact ctcaaccaac   atg aag cat ctc ttg atg tgg agc cca gtg      290
69                                     Met Lys His Leu Leu Met Trp Ser Pro Val
W--> 70                                     1           5           10
72   atc gcg cct gga gaa aca gtg tac tat tct gtc gaa tac cag ggg gag      338
73   ile ala pro gly glu thr val tyr tyr ser val glu tyr gln gly glu
W--> 74   11      15 16      20 21      25 26
76   tac gag agc ctg tac acg agc cac atc tgg atc ccc agc agc tgg tgc      386

```

invidi amino  
 acid numbering -  
 per sequence  
 below number  
 the amino acids  
 under every 5  
 amino acids

Also, FYI, do not use TAB codes  
 between amino acid numbers;  
 use space characters

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/598,042  
 DATE: 07/06/2000  
 TIME: 17:53:44

Input Set : N:\jumbos\598042.txt  
 Output Set: N:\CRF3\07062000\I598042.raw

```

77 Tyr Glu Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys
W--> 78 27 32 37 42
80 tca ctc act gaa ggt cct gag tgt gat gtc act gat gac atc acg gcc 434
81 Ser Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala
W--> 82 43 48 53 58
84 act gtg cca tac aac ctt cgt gtc agg gcc aca ttg ggc tca cag acc 482
85 Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr
W--> 86 59 64 69 74
88 tca gcc tgg agc atc ctg aag cat ccc ttt aat aga aac tca acc atc 530
89 Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile
W--> 90 75 80 85 90
92 ctt acc cga cct ggg atg gag atc acc aaa gat ggc ttc cac ctg gtt 578
93 Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val
W--> 94 91 96 101 106
96 att gag ctg gag gac ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac 626
97 Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr
W--> 98 107 112 117 122
100 tgg agg agg gag cct ggt gcc gag gaa cat gtc aaa atg gtg agg agt 674
101 Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser
W--> 102 123 128 133 138
104 ggg ggt att cca gtg cac cta gaa acc atg gag cca ggg gct gca tac 722
105 Gly Gly Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr
W--> 106 139 144 149 154
108 tgt gtg aag gcc cag aca ttc gtg aag gcc att ggg agg tac agc gcc 770
109 Cys Val Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala
W--> 110 155 160 165 170
112 ttc agc cag aca gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg 818
113 Phe Ser Gln Thr Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu
W--> 114 171 176 181 186
116 gta ctg gcc ctg ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc 866
117 Val Leu Ala Leu Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val
W--> 118 187 192 197 202
120 gtg cca ctg ttc gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt 914
121 Val Pro Leu Phe Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys
W--> 122 203 208 213 218
124 tgc ccc gtg gtg gtc ctc cca gac acc ttg aaa ata acc aat tca ccc 962
125 Cys Pro Val Val Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro
W--> 126 219 224 229 234
128 cag aag tta atc agc tgc aga agg gag gag gtg gat gcc tgt gcc acg 1010
129 Gln Lys Leu Ile Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr
W--> 130 235 240 245 250
132 gct gtg atg tct cct gag gaa ctc ctc agg gcc tgg atc tca taggttt 1059
133 Ala Val Met Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser
W--> 134 251 256 261
136 gcggaaggcc ccagggtgaag ccgagaaacct ggtctgcatg acatggaaac catgagggga 1119
138 caagtgtgtt ttctgttttc cgccacggac aagggtatgag agaagtagga agagcctgtt 1179
140 gtctacaagt ttagaagcaa ccatcagagg cagggtggtt tgtctaacag aacactgact 1239
142 gaggttagg ggatgtgacc tctagactgg gggctgccac ttgctggtg agcaaccctg 1299
144 ggaaaagtga cttcatccct tcggctctaa gttttctcat ctgtaatggg ggaattacct 1359

```

*Same  
 error*

RAW SEQUENCE LISTING                      DATE: 07/06/2000  
 PATENT APPLICATION: US/09/598,042                      TIME: 17:53:44

Input Set : N:\jumbos\598042.txt  
 Output Set: N:\CRF3\07062000\I598042.raw

```

146 acacacctgc taaacacaca cacacagagt ctctctctat atatacacac gtacacataa 1419
148 atacaccag cacttgcaag gctagagggg aactgggtgac actctacagt ctgactgatt 1479
150 cagtgtttct ggagagcagg acataaatgt atgatgagaa tgatcaagga ctctacacac 1539
152 tgggtggctt ggaaagccca ctttcccaga ataatccttg agagaaaaag aatcatggga 1599
154 accatgggtg tgagttcact tcaagcccaa t 1630
159 <210> SEQ ID NO: 2
160 <211> LENGTH: 3186
161 <212> TYPE: DNA
162 <213> ORGANISM: Homo sapiens
164 <220> FEATURE:
165 <221> NAME/KEY: CDS
166 <222> LOCATION: (22)..(1848)
168 <400> SEQUENCE: 2
169 gcgaattggg cccgacgtcg c atg ctc ccg gcc gcc atg gcc gcg gga ttg 51
170 Met Leu Pro Ala Ala Met Ala Ala Gly Leu
W--> 171 1 5
173 tcc ttc atc cac gtg atg tgc ttc ccg ggt cga cga ttt cgt cgg cag 99
174 Ser Phe Ile His Val Met Ser Phe Pro Gly Arg Arg Phe Arg Arg Gln
W--> 175 11 16 21 26
177 gtg gcc cgg ctg ggc cgc act atg cgg ctg cag tgc cca gtg gag ggg 147
178 Val Ala Arg Leu Gly Arg Thr Met Arg Leu Gln Cys Pro Val Glu Gly
W--> 179 27 32 37 42
181 gac ccg ccg ccg ctg acc atg tgg acc aag gat ggc cgc acc atc cac 195
182 Asp Pro Pro Pro Leu Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His
W--> 183 43 48 53 58
185 agc gcc tgg agc cgc ttc cgc gtg ctg ccg cag ggg ctg aag gtg aag 243
186 Ser Gly Trp Ser Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys
W--> 187 59 64 69 74
189 cag gtg gag cgg gag gat gcc gcc gtg tac gtg tgc aag gcc acc aac 291
190 Gln Val Glu Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn
W--> 191 75 80 85 90
193 gcc ttc gcc agc ctg agc gtc aac tac acc ctc gtc gtg ctg gat gac 339
194 Gly Phe Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp
W--> 195 91 96 101 106
197 att agc cca ggg aag gag agc ctg ggg ccc gac agc tcc tct ggg ggt 387
198 Ile Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
W--> 199 107 112 117 122
201 caa gag gac ccc gcc agc cag cag tgg gca cga ccg cgc ttc aca cag 435
202 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr Gln
W--> 203 123 128 133 138
205 ccc tcc aag atg agg cgc cgg gtg atc gca cgg ccc gtg ggt agc tcc 483
206 Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly Ser Ser
W--> 207 139 144 149 154
209 gtg cgg ctc aag tgc gtg gcc agc ggg cac cct cgg ccc gac atc acg 531
210 Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro Asp Ile Thr
W--> 211 155 160 165 170
213 tgg atg aag gac gac cag gcc ttg acg cgc cca gag gcc gct gag ccc 579
214 Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu Ala Ala Glu Pro
W--> 215 171 176 181 186

```

*None*

## RAW SEQUENCE LISTING

DATE: 07/06/2000

PATENT APPLICATION: US/09/598,042

TIME: 17:53:44

Input Set : N:\jumbos\598042.txt

Output Set: N:\CRF3\07062000\I598042.raw

|          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 217      | agg | aag | aag | aag | tgg | aca | ctg | agc | ctg | aag | aac | ctg | cgg | ccg | gag | gac | 627  |
| 218      | Arg | Lys | Lys | Lys | Trp | Thr | Leu | Ser | Leu | Lys | Asn | Leu | Arg | Pro | Glu | Asp |      |
| W--> 219 | 187 |     |     |     |     | 192 |     |     |     |     | 197 |     |     |     |     | 202 |      |
| 221      | agc | ggc | aaa | tac | acc | tgc | cgc | gtg | tcg | aac | cgc | gcg | ggc | gcc | atc | aac | 675  |
| 222      | Ser | Gly | Lys | Tyr | Thr | Cys | Arg | Val | Ser | Asn | Arg | Ala | Gly | Ala | Ile | Asn |      |
| W--> 223 | 203 |     |     |     |     | 208 |     |     |     |     | 213 |     |     |     |     | 218 |      |
| 225      | gcc | acc | tac | aag | gtg | gat | gtg | atc | cag | cgg | acc | cgt | tcc | aag | ccc | gtg | 723  |
| 226      | Ala | Thr | Tyr | Lys | Val | Asp | Val | Ile | Gln | Arg | Thr | Arg | Ser | Lys | Pro | Val |      |
| W--> 227 | 219 |     |     |     |     | 224 |     |     |     |     | 229 |     |     |     |     | 234 |      |
| 229      | ctc | aca | ggc | acg | cac | ccc | gtg | aac | acg | acg | gtg | gac | ttc | ggg | ggg | acc | 771  |
| 230      | Leu | Thr | Gly | Thr | His | Pro | Val | Asn | Thr | Thr | Val | Asp | Phe | Gly | Gly | Thr |      |
| W--> 231 | 235 |     |     |     |     | 240 |     |     |     |     | 245 |     |     |     |     | 250 |      |
| 233      | acg | tcc | ttc | cag | tgc | aag | gtg | cgc | agc | gac | gtg | aag | ccg | gtg | atc | cag | 819  |
| 234      | Thr | Ser | Phe | Gln | Cys | Lys | Val | Arg | Ser | Asp | Val | Lys | Pro | Val | Ile | Gln |      |
| W--> 235 | 251 |     |     |     |     | 256 |     |     |     |     | 261 |     |     |     |     | 266 |      |
| 237      | tgg | ctg | aag | cgc | gtg | gag | tac | ggc | gcc | gag | ggc | cgc | cac | aac | tcc | acc | 867  |
| 238      | Trp | Leu | Lys | Arg | Val | Glu | Tyr | Gly | Ala | Glu | Gly | Arg | His | Asn | Ser | Thr |      |
| W--> 239 | 267 |     |     |     |     | 272 |     |     |     |     | 277 |     |     |     |     | 282 |      |
| 241      | atc | gat | gtg | ggc | ggc | cag | aag | ttt | gtg | gtg | ctg | ccc | acg | ggt | gac | gtg | 915  |
| 242      | Ile | Asp | Val | Gly | Gly | Gln | Lys | Phe | Val | Val | Leu | Pro | Thr | Gly | Asp | Val |      |
| W--> 243 | 283 |     |     |     |     | 288 |     |     |     |     | 293 |     |     |     |     | 298 |      |
| 245      | tgg | tcg | cgg | ccc | gac | ggc | tcc | tac | ctc | aat | aag | ctg | ctc | atc | acc | cgt | 963  |
| 246      | Trp | Ser | Arg | Pro | Asp | Gly | Ser | Tyr | Leu | Asn | Lys | Leu | Leu | Ile | Thr | Arg |      |
| W--> 247 | 299 |     |     |     |     | 304 |     |     |     |     | 309 |     |     |     |     | 314 |      |
| 249      | gcc | cgc | cag | gac | gat | gcg | ggc | atg | tac | atc | tgc | ctt | ggc | gcc | aac | acc | 1011 |
| 250      | Ala | Arg | Gln | Asp | Asp | Ala | Gly | Met | Tyr | Ile | Cys | Leu | Gly | Ala | Asn | Thr |      |
| W--> 251 | 315 |     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |      |
| 253      | atg | ggc | tac | agc | ttc | cgc | agc | gcc | ttc | ctc | acc | gtg | ctg | cca | gac | cca | 1059 |
| 254      | Met | Gly | Tyr | Ser | Phe | Arg | Ser | Ala | Phe | Leu | Thr | Val | Leu | Pro | Asp | Pro |      |
| W--> 255 | 331 |     |     |     |     | 336 |     |     |     |     | 341 |     |     |     |     | 346 |      |
| 257      | aaa | ccg | cca | ggg | cca | cct | gtg | gcc | tcc | tcg | tcc | tcg | gcc | act | agc | ctg | 1107 |
| 258      | Lys | Pro | Pro | Gly | Pro | Pro | Val | Ala | Ser | Ser | Ser | Ser | Ala | Thr | Ser | Leu |      |
| W--> 259 | 347 |     |     |     |     | 352 |     |     |     |     | 357 |     |     |     |     | 362 |      |
| 261      | ccg | tgg | ccc | gtg | gtc | atc | ggc | atc | cca | gcc | ggc | gct | gtc | ttc | atc | ctg | 1155 |
| 262      | Pro | Trp | Pro | Val | Val | Ile | Gly | Ile | Pro | Ala | Gly | Ala | Val | Phe | Ile | Leu |      |
| W--> 263 | 363 |     |     |     |     | 368 |     |     |     |     | 373 |     |     |     |     | 378 |      |
| 265      | ggc | acc | ctg | ctc | ctg | tgg | ctt | tgc | cag | gcc | cag | aag | aag | ccg | tgc | acc | 1203 |
| 266      | Gly | Thr | Leu | Leu | Leu | Trp | Leu | Cys | Gln | Ala | Gln | Lys | Lys | Pro | Cys | Thr |      |
| W--> 267 | 379 |     |     |     |     | 384 |     |     |     |     | 389 |     |     |     |     | 394 |      |
| 269      | ccc | gcg | cct | gcc | cct | ccc | ctg | cct | ggg | cac | cgc | ccg | ccg | ggg | acg | gcc | 1251 |
| 270      | Pro | Ala | Pro | Ala | Pro | Pro | Leu | Pro | Gly | His | Arg | Pro | Pro | Gly | Thr | Ala |      |
| W--> 271 | 395 |     |     |     |     | 400 |     |     |     |     | 405 |     |     |     |     | 410 |      |
| 273      | cgc | gac | cgc | agc | gga | gac | aag | gac | ctt | ccc | tcg | ttg | gcc | gcc | ctc | agc | 1299 |
| 274      | Arg | Asp | Arg | Ser | Gly | Asp | Lys | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Leu | Ser |      |
| W--> 275 | 411 |     |     |     |     | 416 |     |     |     |     | 421 |     |     |     |     | 426 |      |
| 277      | gct | ggc | cct | ggt | gtg | ggg | ctg | tgt | gag | gag | cat | ggg | tct | ccg | gca | gcc | 1347 |
| 278      | Ala | Gly | Pro | Gly | Val | Gly | Leu | Cys | Glu | Glu | His | Gly | Ser | Pro | Ala | Ala |      |
| W--> 279 | 427 |     |     |     |     | 432 |     |     |     |     | 437 |     |     |     |     | 442 |      |
| 281      | ccc | cag | cac | tta | ctg | ggc | cca | ggc | cca | gtt | gct | ggc | cct | aag | ttg | tac | 1395 |

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/598,042  
 DATE: 07/06/2000  
 TIME: 17:53:44

Input Set : N:\jumbos\598042.txt  
 Output Set: N:\CRF3\07062000\I598042.raw

```

282 Pro Gln His Leu Leu Gly Pro Gly Pro Val Ala Gly Pro Lys Leu Tyr
W--> 283 443 448 453 458 1443
285 ccc aaa ctc tac aca gac atc cac aca cac aca cac tgt att gcg gcc
286 Pro Lys Leu Tyr Thr Asp Ile His Thr His Thr His Cys Ile Ala Ala
W--> 287 459 464 469 474
289 gcc tgt gtg agg agc atg ggt ctc cgg cag ccc ccc agc act tac tgg 1491
290 Ala Cys Val Arg Ser Met Gly Leu Arg Gln Pro Pro Ser Thr Tyr Trp
W--> 291 475 480 485 490
293 gcc cag gcc cag ttg ctg gcc cta agt tgt acc cca aac tct aca cag 1539
294 Ala Gln Ala Gln Leu Leu Ala Leu Ser Cys Thr Pro Asn Ser Thr Gln
W--> 295 491 496 501 506
297 aca tcc aca cac aca cac aca cac act ctc aca cac act cac acg tgg 1587
298 Thr Ser Thr His Thr His Thr His Thr Leu Thr His Thr His Thr Trp
W--> 299 507 512 517 522
301 agg gca agg tcc acc agc aca tcc act atc agt gct aga cgg cac cgt 1635
302 Arg Ala Arg Ser Thr Ser Thr Ser Thr Ile Ser Ala Arg Arg His Arg
W--> 303 523 528 533 538
305 atc tgc aga ggg cac ggg ggg gcc ggc cag aca ggc aga ctg gga gga 1683
306 Ile Cys Arg Gly His Gly Gly Ala Gly Gln Thr Gly Arg Leu Gly Gly
W--> 307 539 544 549 554
309 tgg agg acg gag ctg cag acg aag gca ggg gac cca tgg cga gga gga 1731
310 Trp Arg Thr Glu Leu Gln Thr Lys Ala Gly Asp Pro Trp Arg Gly Gly
W--> 311 555 560 565 570
313 atg gcc agc acc cca ggc agt ctg tgt gtg agg cat agc ccc tgg aca 1779
314 Met Ala Ser Thr Pro Gly Ser Leu Cys Val Arg His Ser Pro Trp Thr
W--> 315 571 576 581 586
317 cac aca cac aga cac aca cac tac ctg gat gca tgt atg cac aca cat 1827
318 His Thr His Arg His Thr His Tyr Leu Asp Ala Cys Met His Thr His
W--> 319 587 592 597 602
321 gcg cgc aca cgt gct ccc tga ag gcacacgtac gcacacacgc acatgcacag 1880
322 Ala Arg Thr Arg Ala Pro *
W--> 323 603 608
325 atatgccgcc tgggcacaca gataagctgc ccaaatgcac gcacacgcac agagacatgc 1940
327 cagaacatac aaggacatgc tgccctgaaca tacacacgca caccatgcg cagatgtgct 2000
329 gccctggacac acacacacac acggatgatgc tgcctggacg cacacacgtg cagatattgt 2060
331 atccggacac acacgtgcac agatatgctg cctggacaca cagataatgc tgccttgaca 2120
333 cacacatgca cggatattgc ctggacacac acacacacac gtgtgcacag atatgctgtc 2180
335 tggacacgca cacacatgca gatattgctg ctggacacac acttcacag acacgtgcac 2240
337 aggcgcagat atgctgctg gacacacgcg gatattgctg ctatgcacac acacacgcag 2300
339 acatgctgtc cggacacaca cacycatgca cagatattgt gtcgggacac acacacgcac 2360
341 gcagatatgc tgccctggaca cacacacaga taatgctgcc toaacactca cacacgtgca 2420
343 gatattgctt ggacacacac atgtgcacag atatgctgtc tggacatgca cacacgtgca 2480
345 gatattgctt ccggatacac acgcacgcac acatgcagat atgctgcctg ggcacacact 2540
347 tccggacaca catgcacaca cagggtgcaga tatgctgctt ggacacacgc agactgacgt 2600
349 gcttttggga ggggtgtgct tgaagcctgc agtactgtgt ccgtgaggct catagttgat 2660
351 gagggacttt cccctgtcca ccgtactccc cccaactctg cccgcctctg tccccgcctc 2720
353 agtccccgcc tccatccccg cotctgtccc ctggccttgg cggctatttt tgcacactgo 2780
355 ctggggtgcc caggagtcgc ctactgtgtt gggctggggt tgggggcaca gcagcccaaa 2840
357 gctgagaggt ctggagccca tggctagtgt ctcattcccc ctgcattctc ccctgcacac 2900

```

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

DATE: 07/06/2000

PATENT APPLICATION: US/09/598,042

TIME: 17:53:45

Input Set : N:\jumbos\598042.txt

Output Set: N:\CRF3\07062000\I598042.raw

L:32 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:33 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:70 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:74 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:78 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:82 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:86 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:90 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:94 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:98 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:102 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:106 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:110 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:114 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:118 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:122 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:126 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:130 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:134 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1  
L:171 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:175 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:179 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:183 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:187 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:191 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:195 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:199 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:203 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:207 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:211 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:215 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:219 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:223 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:227 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:231 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:235 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:239 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:243 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:247 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:251 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:255 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:259 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:263 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:267 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:271 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:275 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:279 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:283 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2

## VERIFICATION SUMMARY

DATE: 07/06/2000

PATENT APPLICATION: US/09/598,042

TIME: 17:53:45

Input Set : N:\jumbos\598042.txt

Output Set: N:\CRF3\07062000\I598042.raw

L:287 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:291 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:295 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:299 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2  
L:4084 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:5765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18  
L:6785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24  
L:11220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47  
L:11606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48  
L:11608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48  
L:14744 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61  
L:15911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67  
L:21216 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95  
L:22869 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:25323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116  
L:26165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123  
L:26169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123  
L:26406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125  
L:26408 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125  
L:31573 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:158  
L:31575 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:158  
L:31712 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:160  
L:31714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:160  
L:35204 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:187  
L:35363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:189  
L:35449 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190  
L:35577 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190  
L:35581 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190  
L:35583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190  
L:35589 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:190  
L:35619 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:191  
L:35741 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:191  
L:35745 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:191  
L:35747 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:191  
L:35753 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:191  
L:37012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199  
L:37371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:201  
L:37513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:202  
L:38005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:205  
L:38538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:209  
L:39649 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:217  
L:42405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:234  
L:42407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:234  
L:43387 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:243  
L:43603 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:244  
L:44239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:249  
L:46042 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:262  
L:46044 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:262  
L:46506 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267



VERIFICATION SUMMARY

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Input Set : N:\jumbos\598042.txt

Output Set: N:\CRF3\07062000\I598042.raw

L:48220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:282  
L:49481 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:292  
L:52665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:311  
L:54653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:323